State of Ohio Environmental Protection Agency

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George V. Voinovich
Governor

August 15, 1991

RE: JEFFERSON COUNTY
TIMET

Mr. Bert Carmichael
Plant Manager
Titanium Metals Corporation
P.O. Box 309
100 Titanium Way
Toronto, Ohio 43964

Mr. Carmichael:

On May 22 and 23, 1991 Jim Grow, Marty Kuklis, and Larry Tock of Ohio EPA conducted a Compliance Sampling Inspection at Titanium Metals Corporation (Timet) in Toronto, Ohio. Harry Turic and Mike Williamson of Timet accompanied Ohio EPA personnel through the plant during the CSI. Keith Zamborsky and Conrad Watts, both of Timet's laboratory, were also questioned on laboratory practices at Timet. The purpose of the inspection was to determine Timet's compliance status with the terms and conditions of NPDES Permit No. OIE00010*DD and Director's Final Findings and Orders (DFFO) dated May 9, 1990.

Wastewater effluent samples were collected by Ohio EPA and split with Timet for separate analysis. Results of these separate analyses are listed in Tables I and II.

As a result of this CSI, we have the following comments.

1. Since the last CSI on June 28 and 29, 1990, Ohio Citizens' Action, an environmental group, has issued notice to Timet, Ohio EPA, and U.S. EPA of their intent to bring a third party lawsuit against Timet for violations of it's NPDES permit. This has resulted in Timet negotiating with both Ohio EPA and Ohio Citizens' Action to bring their plant into compliance with their NPDES permit. These negotiations have resulted in Timet agreeing to new Director's Final Findings and Orders. The DFFO's, which are still pending as of this writing, will include a compliance schedule to build a wastewater treatment plant to treat process wastewater. Ohio EPA has also modified Timet's NPDES permit. The modification of the permit is a result of Timet and Ohio EPA settling issues involved with Timet's appeal of their NPDES permit. This modification also takes into account changes in Timet's processes which have resulted in process wastewater no longer being discharged through outfall 003.

2. Since the last CSI on June 28 and 29, 1990, Timet has experienced numerous violations of the effluent limitations listed in the NPDES permit and the DFFO's. The violations through April 1991 are as follows:

Outfall	Date	Parameter	Reported	Units	Limitation
006	7/13/90	TSS	16.4	mg/l	12.1
006	7/26/90	TSS	53.2	mg/l	12.1
006	7/26/90	TSS	425.9	kg/day	114.79
006	July 1990	TSS*	7.9	mg/l	5.76
006	8/ 8/90	pH	2.9	S.U.	6.0 min.
006	8/15/90	Fluoride	41.6	mg/l	20.3
006	8/15/90	Fluoride	304.0	kg/day	192.30
006	Aug. 1990	Fluoride*	15.99	mg/l	9.01
006	Aug. 1990	Fluoride*	108.7	kg/day	85.3
006	8/28/90	Cyanide	0.02	mg/l	0.014
006	Aug. 1990	Cyanide*	0.02	mg/l	0.006
006	Aug. 1990	Cyanide*	0.114	kg/day	0.058
006	8/ 2/90	TSS	68.80	mg/l	12.1
006	8/ 8/90	TSS	15.60	mg/l	12.1
006	8/15/90	TSS	29.60	mg/l	12.1
006	8/23/90	TSS	13.75	mg/l	12.1
006	Aug. 1990	TSS*	27.09	mg/l	5.76
006	8/ 2/90	TSS	553.9	kg/day	114.79
006	8/15/90	TSS	216.3	kg/day	114.79
006	Aug. 1990	TSS*	197.6	kg/day	54.56
006	Aug. 1990	MDL for Lead* not lower than permit limitation			
006	9/ 5/90	TSS	21.00	mg/l	12.1
006	9/21/90	TSS	14.60	mg/l	12.1
006	Sept. 1990	TSS*	13.05	mg/l	5.76
006	9/15/90	TSS	154.50	kg/day	114.79
006	Sept. 1990	TSS*	86.45	kg/day	54.56
006	9/26/90	pH	4.35	S.U.	6.0 min.
006	9/26/90	Hg	0.5	ug/l	0.3
006	Sept. 1990	Hg*	0.5	ug/l	0.2
006	9/26/90	Hg	0.0034	kg/day	0.0028
006	Sept. 1990	Hg*	0.0035	kg/day	0.0018
003	9/11/90	pH	5.30	S.U.	6.0 min.
003	9/11/90	Fluoride	29.1	mg/l	15.63
003	Sept. 1990	Fluoride*	11.89	mg/l	6.93
003	9/11/90	Ti	4000	ug/l	3486
003	9/26/90	Cyanide	0.086	mg/l	0.018
003	Sept. 1990	Cyanide*	0.086	mg/l	0.003
003	9/26/90	Cyanide	0.0085	kg/day	0.003
003	Sept. 1990	Cyanide*	0.0085	kg/day	0.002

002	Oct. 1990	Total Residual Chlorine	Failure to report 1/week as required by NPDES permit		
004	Oct. 1990	pH	Failure to report 2/month as required by NPDES permit		
005	Oct. 1990	Total Residual Chlorine	Failure to report 1/week as required by NPDES permit		
006	10/17/90	TSS	20.4	mg/l	12.1
006	10/25/90	TSS	14.8	mg/l	12.1
006	Oct. 1990	TSS*	12.16	mg/l	5.76
006	10/17/90	TSS	123.00	kg/day	114.79
006	10/25/90	TSS	118.76	kg/day	114.79
006	Oct. 1990	TSS*	82.98	kg/day	54.56
001	10/17/90	pH	6.4	S.U.	6.5 min.
003	Oct. 1990	Ammonia	Failure to report 1/month as require by NPDES permit		
003	Nov. 1990	Zn*	70	ug/l	34
003	11/27/90	Pb	90	ug/l	31
003	Nov. 1990	Pb*	90	ug/l	20
004	Nov. 1990	pH	Failure to monitor 2/month		
006	11/ 6/90	pH	3.85	S.U.	6.0 min.
006	11/27/90	pH	4.60	S.U.	6.0 min.
006	11/ 6/90	O&G	18.0	mg/l	5.90
006	Nov. 1990	O&G*	5.83	mg/l	3.54
006	11/ 6/90	O&G	139.0	kg/day	55.9
006	Nov. 1990	O&G*	44.5	kg/day	33.57
006	11/ 6/90	Fluoride	28.1	mg/l	20.3
006	Nov. 1990	Fluoride*	14.43	mg/l	9.01
006	11/ 6/90	Fluoride	217.1	kg/day	192.3
006	Nov. 1990	Fluoride*	108.4	kg/day	85.30
006	11/14/90	TSS	26.20	mg/l	12.1
006	11/27/90	TSS	29.40	mg/l	12.1
006	Nov. 1990	TSS*	15.08	mg/l	5.76
006	11/14/90	TSS	190.9	kg/day	114.79
006	11/27/90	TSS	206.2	kg/day	114.79
006	Nov. 1990	TSS*	109.8	kg/day	54.56
001	12/13/90	pH	3.00	S.U.	6.5 min.
003	12/ 7/90	Hg	0.4	ug/l	0.3
003	Dec. 1990	Hg*	0.4	ug/l	0.2
003	12/ 7/90	Cyanide	0.025	ug/l	0.018
003	Dec. 1990	Cyanide*	0.025	ug/l	0.003
006	12/18/90	pH	5.10	S.U.	6.0 min.
006	12/ 7/90	Fluoride	85.4	mg/l	20.3
006	12/13/90	Fluoride	34.9	mg/l	20.3
006	Dec. 1990	Fluoride*	34.41	mg/l	9.01
006	12/ 7/90	Fluoride	594.1	kg/day	192.3
006	12/13/90	Fluoride	200.2	kg/day	192.3
006	Dec. 1990	Fluoride*	229.8	kg/day	85.30

006	12/ 7/90	Ti	19,000	ug/l	13,149
006	12/ 7/90	Ti	132.2	kg/day	124.42
006	12/18/90	TSS	20.6	mg/l	12.1
006	Dec. 1990	TSS*	8.70	mg/l	5.76
006	12/18/90	TSS	149.3	kg/day	114.79
006	Dec. 1990	TSS*	61.9	kg/day	54.56
006	12/ 7/90	Cyanide	0.031	mg/l	0.014
006	Dec. 1990	Cyanide*	0.031	mg/l	0.006
006	12/ 7/90	Cyanide	0.216	kg/day	0.1405
006	Dec. 1990	Cyanide*	0.216	kg/day	0.058
006	12/ 7/90	Zn	110	ug/l	75
006	Dec. 1990	Zn*	110	ug/l	31
006	12/ 7/90	Zn	0.765	kg/day	0.712
006	Dec. 1990	Zn*	0.765	kg/day	0.297
006	12/ 7/90	Hg	0.4	ug/l	0.3
006	Dec. 1990	Hg*	0.4	ug/l	0.2
006	Dec. 1990	Hg*	0.0028	kg/day	0.0018
003	1/23/91	Ti	11,000	ug/l	3486
003	Jan. 1991	Ti*	4,400	ug/l	2324
003	Jan. 1991	Zn*	80	ug/l	34
003	Jan. 1991	Hg*	0.3	ug/l	0.2
006	1/30/91	Hg	0.5	ug/l	0.3
006	Jan. 1991	Hg*	0.5	ug/l	0.2
006	1/30/91	Hg	0.0029	kg/day	0.0028
006	Jan. 1991	Hg*	0.0029	kg/day	0.0018
006	1/ 30/91	Zn	90	ug/l	75
006	Jan. 1991	Zn*	90	ug/l	31
006	Jan. 1991	Zn*	0.52	kg/day	0.297
006	1/ 3/91	pH	3.50	S.U.	6.0 min.
006	1/23/91	pH	3.95	S.U.	6.0 min.
006	1/23/91	Ti	20,000	ug/l	13,149
006	Jan. 1991	Ti*	8,800	ug/l	8,766
006	1/23/91	Ti	140.0	kg/day	124.42
006	1/ 3/91	Fluoride	23.0	mg/l	20.3
006	1/23/91	Fluoride	32.4	mg/l	20.3
006	Jan. 1991	Fluoride*	13.35	mg/l	9.01
006	1/23/91	Fluoride	226.9	kg/day	192.30
006	Jan. 1991	Fluoride*	92.6	kg/day	85.30
003	2/20/91	Ti	7000	ug/l	3486
003	Feb. 1991	Ti*	2750	ug/l	2324
006	2/28/91	TSS	23.0	mg/l	12.1
006	Feb. 1991	TSS*	11.9	mg/l	5.76
006	2/28/91	TSS	167.06	kg/day	114.79
006	Feb. 1991	TSS*	82.94	kg/day	54.56
006	3/ 6/91	pH	4.0	S.U.	6.0 min.
006	3/27/91	TSS	37.0	mg/l	12.1
006	Mar. 1991	TSS*	12.55	mg/l	5.76
006	3/27/91	TSS	215.40	kg/day	114.79
006	Mar. 1991	TSS*	83.03	kg/day	54.56

006	4/ 5/91	TSS	15.80	mg/l	12.1
006	4/24/91	TSS	18.80	mg/l	12.1
006	Apr. 1991	TSS*	12.44	mg/l	5.76
006	4/24/91	TSS	159.46	kg/day	114.79
006	Apr. 1991	TSS*	86.46	kg/day	54.56

*: 30-day Average

While most of the above violations may be remedied through new Director's Findings and Orders and/or changes in processes, some of them can only be corrected through improved laboratory, sampling, and reporting procedures. Every effort should be made to comply with all terms and conditions of your NPDES permit and DFFO's.

(Several typographical errors made in the notices of violations previously sent to you have been corrected in the above list. The above list is believed to be accurate. If you believe any of the violations listed above are incorrect or inaccurate please inform this office.)

3. The effluent discharging from outfall OIE00010001 was causing serious discoloration to the stream bed of Jeddo Run. This very noticeable accumulation of contaminants is a violation of Part III, Paragraph 2 of your NPDES permit. It is puzzling that this effect has not been observed before by Ohio EPA since there have been no known changes to the wastewater sources upstream of this outfall. An explanation describing why this new effect has been observed is requested. Furthermore, please indicate what steps will be taken to reduce this pollution until process wastewater will be eliminated from this outfall.

4. The results of Timet's analyses for lead (Pb), Zinc (Zn) and Total Suspended Solids (TSS) were not consistent with those of Ohio EPA. Timet's Pb analysis, based on the results of the samples analyzed for outfalls 003 and 006, are approximately 2000 % greater than Ohio EPA's results. I recommend that Timet review its laboratory procedures for possible routes of sample contamination with respect to Pb analysis. A detailed description of your actual Pb analysis procedure is requested. Timet's Zn analysis results were all much lower than those of Ohio EPA's; Zn results ranged from 16.7 % to 57 % of the value reported by Ohio EPA for the same samples. A review of your Zn analysis procedure is also requested. Timet's result for the TSS analysis at outfall 006 was almost 800 % greater than Ohio EPA's. Please review your TSS analysis procedure, also.

5. The latest U.S. EPA DMR-QA study, dated July 6, 1990 listed Timet's cyanide analysis as "NOT ACCEPTABLE". This was also true for the 1989 DMR-QA study. Timet should once again

(#5 Cont.)

review its analysis of this parameter for any errors. A QA/QC check sample should be submitted to your laboratory or samples should be split with a second laboratory to begin further efforts to resolve this problem.

6. The laboratory's standard solution for analyzing titanium had passed its expiration date. Any analysis completed using this solution is to be considered invalid. To comply with the condition of your permit requiring the use of EPA approved methods, all standard solutions, buffers, etc. must be replaced no later than the date of expiration listed on their containers. Please review your records to determine which analyses were conducted with the expired solution and report each of those individual analyses to this office.

Based on the numerous effluent violations which have been experienced at Timet in the past year and the comments listed above, Timet is considered to be in Non-Compliance with the terms and conditions of NPDES Permit Number OIE00010*DD and Director's Final Finding's and Orders dated May 9, 1990.

Please respond, in writing, within thirty (30) days of receiving this letter. If you have any questions, please contact Larry Tock at this office.

Sincerely,

David D. Schuetz

David D. Schuetz, P.E.
Unit Supervisor
Southeast District Office
Division of Water Pollution Control

By
Lawrence E. Tock LET
District Engineer
Enforcement and Compliance, DWPC

CC: Heidi Sorin, C.O.

TABLE II
COMPLIANCE SAMPLING INSPECTION DATA

ENTITY: Titanium Metals Corporation
DIVISION: Timet
PLANT: Toronto Plant
DATES SAMPLED: 5/22-23/91

				OHIO EPA		ENTITY		PERMIT LIMITS	
STA.	T[1]	PARAMETER	UNITS	CONC.	Loading (KG/D)	CONC.	Loading (KG/D)	CONC.	Loading (KG/D)
001	C	Copper,Total	ug/l	150		120			
	C	Zinc,Total	ug/l	110		30			
	C	Lead,Total	ug/l	7					
	C	Aluminum	ug/l	<200					
	C	Ammonia as N	mg/l	<0.05					
	G	Oil & Grease	mg/l	1.26					
		Flow	MGD	0.006					
003	C	Copper,Total	ug/l	40		40		40	0.049
	C	Lead,Total	ug/l	7		130		31	0.038
	C	Zinc,Total	ug/l	60		10		114	0.1402
	C	Aluminum	ug/l	290		410			
	G	Cyanide,Total	ug/l	<5		<0.010		.018	0.002
	C	Ammonia as N	mg/l	0.10		0.14		34.9	43.0
	G	Oil & Grease	mg/l	<1.0				20	24.6
	C	Total Suspended Solids	mg/l	15				108	132.66
		Flow	MGD	-[2]					
006	C	Copper,Total	ug/l	10	0.077	10	0.077	40	0.378
	C	Lead,Total	ug/l	9	0.07	200	1.53	21	0.204
	C	Zinc,Total	ug/l	70	0.54	40	3.07	75	0.712
	C	Aluminum	ug/l	300	2.31	350			
	G	Cyanide,Total	ug/l	<5		<0.01		.014	0.1405
	C	Ammonia as N	mg/l	0.10	0.77	0.15	1.15	6.85	64.89
	G	Oil & Grease	mg/l	2.25	17.3			5.90	55.9
	C	Total Suspended Solids	mg/l	7	54			12.1	114.79
		Flow	MGD	2.031					

DWQPA

[1]Sample type; G=grab;C=composite

[2]Flow Meter Broken